```
Trying 3106016892...Open

Welcome to STN International!  Enter x:x
LOGINID:ssspta1617srh
PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2


* * * * * * * * * *   Welcome to STN International   * * * * * * * * * *

 NEWS  1           Web Page URLs for STN Seminar Schedule - N. America
 NEWS  2  Sep 17   IMSworld Pharmaceutical Company Directory name change
                   to PHARMASEARCH
 NEWS  3  Oct 09   Korean abstracts now included in Derwent World Patents
                   Index
 NEWS  4  Oct 09   Number of Derwent World Patents Index updates increased
 NEWS  5  Oct 15   Calculated properties now in the REGISTRY/ZREGISTRY File
 NEWS  6  Oct 22   Over 1 million reactions added to CASREACT
 NEWS  7  Oct 22   DGENE GETSIM has been improved
 NEWS  8  Oct 29   AAASD no longer available
 NEWS  9  Nov 19   New Search Capabilities  USPATFULL and USPAT2
 NEWS 10  Nov 19   TOXCENTER(SM) - new toxicology file now available on STN
 NEWS 11  Nov 29   COPPERLIT now available on STN
 NEWS 12  Nov 29   DWPI revisions to NTIS and US Provisional Numbers
 NEWS 13  Nov 30   Files VETU and VETB to have open access
 NEWS 14  Dec 10   WPINDEX/WPIDS/WPIX New and Revised Manual Codes for 2002
 NEWS 15  Dec 10   DGENE BLAST Homology Search
 NEWS 16  Dec 17   WELDASEARCH now available on STN
 NEWS 17  Dec 17   STANDARDS now available on STN
 NEWS 18  Dec 17   New fields for DPCI
 NEWS 19  Dec 19   CAS Roles modified
 NEWS 20  Dec 19   1907-1946 data and page images added to CA and CAplus
 NEWS 21  Jan 25   BLAST(R) searching in REGISTRY available in STN on the Web
 NEWS 22  Jan 25   Searching with the P indicator for Preparations
 NEWS 23  Jan 29   FSTA has been reloaded and moves to weekly updates
 NEWS 24  Feb 01   DKILIT now produced by FIZ Karlsruhe and has a new update
                   frequency

 NEWS EXPRESS  February 1 CURRENT WINDOWS VERSION IS V6.0d,
               CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP),
               AND CURRENT DISCOVER FILE IS DATED 05 FEBRUARY 2002
 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
 NEWS INTER    General Internet Information
 NEWS LOGIN    Welcome Banner and News Items
 NEWS PHONE    Direct Dial and Telecommunication Network Access to STN
 NEWS WWW      CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that
specific topic.

  All use of STN is subject to the provisions of the STN Customer
  agreement.  Please note that this agreement limits use to scientific
  research.  Use for software development or design or implementation
  of commercial gateways or other similar uses is prohibited and may
  result in loss of user privileges and other penalties.

  * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 17:25:09 ON 09 FEB 2002

=> fil reg
```

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.15	0.15

FILE 'REGISTRY' ENTERED AT 17:25:18 ON 09 FEB 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

STRUCTURE FILE UPDATES: 7 FEB 2002 HIGHEST RN 390744-76-0
DICTIONARY FILE UPDATES: 7 FEB 2002 HIGHEST RN 390744-76-0

TSCA INFORMATION NOW CURRENT THROUGH July 7, 2001

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

The P indicator for Preparations was not generated for all of the CAS Registry Numbers that were added to the H/Z/CA/CAplus files between 12/27/01 and 1/23/02. Use of the P indicator in online and SDI searches during this period, either directly appended to a CAS Registry Number or by qualifying an L-number with /P, may have yielded incomplete results. As of 1/23/02, the situation has been resolved. Also, note that searches conducted using the PREP role indicator were not affected.

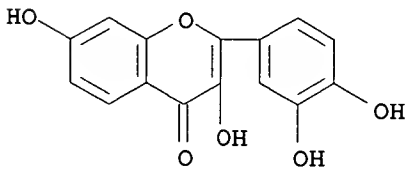
Customers running searches and/or SDIs in the H/Z/CA/CAplus files incorporating CAS Registry Numbers with the P indicator between 12/27/01 and 1/23/02, are encouraged to re-run these strategies. Contact the CAS Help Desk at 1-800-848-6533 in North America or 1-614-447-3698, worldwide, or send an e-mail to help@cas.org for further assistance or to receive a credit for any duplicate searches.

=> s fisetin/cn
L1 1 FISETIN/CN

=> d

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN 528-48-3 REGISTRY
CN 4H-1-Benzopyran-4-one, 2-(3,4-dihydroxyphenyl)-3,7-dihydroxy- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **Fisetin (6CI)**
CN Flavone, 3,3',4',7-tetrahydroxy- (8CI)
OTHER NAMES:
CN 3,3',4',7-Tetrahydroxyflavone
CN 5-Desoxyquercetin
CN Bois Bleu de Honqrie
CN C.I. 75620
CN C.I. Natural Brown 1
CN Cotinin
CN Fiestin
CN Fietin
CN Fisetholz

CN Fustel
CN Fustet
CN Junger Fustik
CN Superfustel
CN Superfustel K
CN Ungarisches Gelbholz
CN Ventin Sumach
CN Viset
CN Young Fustic
CN Young Fustic Crystals
CN Zante Fustic
FS 3D CONCORD
MF C15 H10 O6
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DRUGU, EMBASE, HODOC*, IPA, MEDLINE, MRCK*, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS*, TOXCENTER, TOXLIT, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: EINECS**, NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

562 REFERENCES IN FILE CA (1967 TO DATE)
5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
563 REFERENCES IN FILE CAPLUS (1967 TO DATE)
39 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> sel name
E1 THROUGH E21 ASSIGNED

=> fil capl

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	6.17	6.32

FILE 'CAPLUS' ENTERED AT 17:25:50 ON 09 FEB 2002

databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 9 Feb 2002 VOL 136 ISS 7
FILE LAST UPDATED: 7 Feb 2002 (20020207/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

The P indicator for Preparations was not generated for all of the CAS Registry Numbers that were added to the CAS files between 12/27/01 and 1/23/02. As of 1/23/02, the situation has been resolved. Searches and/or SDIs in the H/Z/CA/CAplus files incorporating CAS Registry Numbers with the P indicator executed between 12/27/01 and 1/23/02 may be incomplete. See the NEWS message on this topic for more information.

```
=> s l1 or fisetin
           565 L1
           516 FISETIN
             3 FISETINS
           519 FISETIN
                 (FISETIN OR FISETINS)
L2         684 L1 OR FISETIN

=> s cellul? or ?obes? or weight loss or weight reduc? or lipoly?
        576009 CELLUL?
        123450 ?OBES?
         84518 WEIGHT
          7488 WEIGHTS
         89900 WEIGHT
                 (WEIGHT OR WEIGHTS)
       1245811 WT
         92979 WTS
       1293861 WT
                 (WT OR WTS)
       1319171 WEIGHT
                 (WEIGHT OR WT)
        462312 LOSS
         90953 LOSSES
        523939 LOSS
                 (LOSS OR LOSSES)
         38378 WEIGHT LOSS
                 (WEIGHT(W)LOSS)
         84518 WEIGHT
          7488 WEIGHTS
         89900 WEIGHT
                 (WEIGHT OR WEIGHTS)
       1245811 WT
         92979 WTS
       1293861 WT
                 (WT OR WTS)
       1319171 WEIGHT
                 (WEIGHT OR WT)
       1616067 REDUC?
        716238 REDN
```

```
         37510 REDNS
        739655 REDN
                  (REDN OR REDNS)
       2029523 REDUC?
                  (REDUC? OR REDN)
          3306 WEIGHT REDUC?
                  (WEIGHT(W)REDUC?)
         15755 LIPOLY?
L3      746419 CELLUL? OR ?OBES? OR WEIGHT LOSS OR WEIGHT REDUC? OR LIPOLY?

=> s l2 (s) l3
L4           10 L2 (S) L3

=> d 1-5

L4   ANSWER 1 OF 10  CAPLUS  COPYRIGHT 2002 ACS
AN   1999:147371  CAPLUS
DN   130:218273
TI   Phosphotyrosine phosphatase inhibitors or tyrosine kinase activators for
     controlling cellular proliferation
IN   Schieven, Gary L.
PA   Bristol-Myers Squibb Company, USA
SO   U.S., 73 pp., Cont.-in-part of U.S. Ser. No. 189,330.
     CODEN: USXXAM
DT   Patent
LA   English
FAN.CNT 2
     PATENT NO.         KIND  DATE          APPLICATION NO.  DATE
     ---------------    ----  --------      ---------------  --------
PI   US 5877210         A     19990302      US 1995-465813   19950605
     US 5565491         A     19961015      US 1994-189330   19940131
     CA 2179715         AA    19950803      CA 1995-2179715  19950130
     US 5583242         A     19961210      US 1995-450342   19950525
     US 5693627         A     19971202      US 1995-450401   19950525
PRAI US 1994-189330           19940131
RE.CNT  19    THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4   ANSWER 2 OF 10  CAPLUS  COPYRIGHT 2002 ACS
AN   1995:258964  CAPLUS
DN   122:75763
TI   Interplay between excited-state intramolecular proton transfer and charge
     transfer in flavonols and their use as protein-binding-site fluorescence
     probes
AU   Sytnik, Alexander; Gormin, David; Kasha, Michael
CS   Inst. Mol. Biophys. Dep. Chem., Florida State Univ., Tallahassee, FL,
     32306-3015, USA
SO   Proc. Natl. Acad. Sci. U. S. A. (1994), 91(25), 11968-72
     CODEN: PNASA6; ISSN: 0027-8424
DT   Journal
LA   English

L4   ANSWER 3 OF 10  CAPLUS  COPYRIGHT 2002 ACS
AN   1994:208331  CAPLUS
DN   120:208331
TI   Potentiation of .beta.-adrenoceptor agonist-mediated lipolysis
     by quercetin and fisetin in isolated rat adipocytes
AU   Kuppusamy, U. R.; Das. N. P.
CS   Fac. Med., Natl. Univ. Singapore, Singapore, 0511, Singapore
SO   Biochem. Pharmacol. (1994), 47(3), 521-9
     CODEN: BCPCA6; ISSN: 0006-2952
```

DT Journal
LA English

L4 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2002 ACS
AN 1993:225097 CAPLUS
DN 118:225097
TI Ascorbic acid-enhanced antiproliferative effect of flavonoids on squamous cell carcinoma in vitro
AU Kandaswami, Chithan; Perkins, Eddie; Soloniuk, Donald S.; Drzewiecki, Gary; Middleton, Elliott, Jr.
CS Sch. Med. Biomed. Sci., State Univ. New York, Buffalo, NY, 14203, USA
SO Anti-Cancer Drugs (1993), 4(1), 91-6
CODEN: ANTDEV; ISSN: 0959-4973
DT Journal
LA English

L4 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2002 ACS
AN 1992:625763 CAPLUS
DN 117:225763
TI Effects of flavonoids on cyclic AMP phosphodiesterase and lipid mobilization in rat adipocytes
AU Kuppusamy, U. R.; Das, N. P.
CS Fac. Med., Natl. Univ. Singapore, Singapore, 0511, Singapore
SO Biochem. Pharmacol. (1992), 44(7), 1307-15
CODEN: BCPCA6; ISSN: 0006-2952
DT Journal
LA English

=> d ibib abs kwic 3, 5

L4 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1994:208331 CAPLUS
DOCUMENT NUMBER: 120:208331
TITLE: Potentiation of .beta.-adrenoceptor agonist-mediated **lipolysis** by quercetin and **fisetin** in isolated rat adipocytes
AUTHOR(S): Kuppusamy, U. R.; Das. N. P.
CORPORATE SOURCE: Fac. Med., Natl. Univ. Singapore, Singapore, 0511, Singapore
SOURCE: Biochem. Pharmacol. (1994), 47(3), 521-9
CODEN: BCPCA6; ISSN: 0006-2952
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Quercetin and fisetin, two naturally occurring bioflavonoids mobilized lipids and enzymes in the absence or presence of epinephrine in intact rat adipocytes. Dose-(0-250 .mu.M) and time-(0-2 h) course studies, showed that they stimulated phosphodiesterase (PDE) activity and simultaneously exert cAMP accumulation. These bioflavonoids when present either singly or together with epinephrine stimulated the membrane-bound PDE but not the cytosolic PDE. The stimulation may act as a feedback mechanism to terminate the cAMP effects. The action of theophylline, a known **lipolytic** agent (exerting its effects through antagonism of adenosine A1 receptor as well as PDE inhibition) was not potentiated by either **fisetin** or quercetin. However, the flavonoids potentiated epinephrine- or isoproterenol-induced lipolysis. Their effects were inhibited by propranolol (a .beta.-receptor antagonist). These results suggest that the flavonoids act synergistically with epinephrine on .beta.-adrenergic receptor and not through phosphodiesterase inhibition to stimulate adipocyte lipolysis. Increase in membrane phospholipid methylation occurred as a consequence of the

epinephrine and/or quercetin/**fisetin** actions, and it correlated with the **cellular** accumulation of cAMP.

TI Potentiation of .beta.-adrenoceptor agonist-mediated **lipolysis** by quercetin and **fisetin** in isolated rat adipocytes

AB Quercetin and fisetin, two naturally occurring bioflavonoids mobilized lipids and enzymes in the absence or presence of epinephrine in intact rat adipocytes. Dose-(0-250 .mu.M) and time-(0-2 h) course studies, showed that they stimulated phosphodiesterase (PDE) activity and simultaneously exert cAMP accumulation. These bioflavonoids when present either singly or together with epinephrine stimulated the membrane-bound PDE but not the cytosolic PDE. The stimulation may act as a feedback mechanism to terminate the cAMP effects. The action of theophylline, a known **lipolytic** agent (exerting its effects through antagonism of adenosine A1 receptor as well as PDE inhibition) was not potentiated by either **fisetin** or quercetin. However, the flavonoids potentiated epinephrine- or isoproterenol-induced lipolysis. Their effects were inhibited by propranolol (a .beta.-receptor antagonist). These results suggest that the flavonoids act synergistically with epinephrine on .beta.-adrenergic receptor and not through phosphodiesterase inhibition to stimulate adipocyte lipolysis. Increase in membrane phospholipid methylation occurred as a consequence of the epinephrine and/or quercetin/**fisetin** actions, and it correlated with the **cellular** accumulation of cAMP.

ST quercetin **fisetin lipolysis** epinephrine adipocyte; beta adrenergic receptor quercetin **fisetin lipolysis**

IT Adipose tissue, metabolism
(adipocyte, .beta.-adrenoceptor agonist-mediated **lipolysis** in, by quercetin and **fisetin** potentiation of)

IT Adrenergic agonists
(.beta.-, **lipolysis** from, quercetin and **fisetin** effect on, in adipocytes)

IT Receptors
RL: BIOL (Biological study)
(.beta.-adrenergic, in epinephrine and quercetin and **fisetin** induction of **lipolysis** in adipocytes)

IT 51-43-4, Epinephrine 58-55-9, Theophylline, biological studies 7683-59-2, Isoproterenol
RL: BIOL (Biological study)
(**lipolysis** from, quercetin and **fisetin** effect on, in adipocytes)

IT 60-92-4, Cyclic AMP 9025-82-5, Phosphodiesterase
RL: BIOL (Biological study)
(quercetin and **fisetin** effect on, in .beta.-adrenoceptor agonist-mediated **lipolysis** in adipocytes)

IT 117-39-5, Quercetin **528-48-3**, **Fisetin**
RL: BIOL (Biological study)
(.beta.-adrenoceptor agonist-mediated **lipolysis** potentiation by, in adipocytes)

L4 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1992:625763 CAPLUS
DOCUMENT NUMBER: 117:225763
TITLE: Effects of flavonoids on cyclic AMP phosphodiesterase and lipid mobilization in rat adipocytes
AUTHOR(S): Kuppusamy, U. R.; Das, N. P.
CORPORATE SOURCE: Fac. Med., Natl. Univ. Singapore, Singapore, 0511, Singapore
SOURCE: Biochem. Pharmacol. (1992), 44(7), 1307-15
CODEN: BCPCA6; ISSN: 0006-2952
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Thirty-one flavonoids were tested for their effects on low-Km phosphodiesterase (PDE) with cAMP as the substrate. Quercetin, luteolin, scutellarein, phloretin and genistein had inhibitory potencies comparable to or greater than that of 3-isobutyl-2-methylxanthine (EC50 30-50 .mu.M). Only 4 compds. (catechin, epicatechin, taxifolin and fustin) stimulated the enzyme activity (stimulatory EC50 130-240 .mu.M). The most potent PDE inhibitors were aglycons that had a C2,3 double bond, a keto group at C4 and hydroxyls at C3' and(or) C4'. However, when the C-ring is opened, the requirement for the C2,3 double bond is eliminated. The same series of flavonoids were also tested for their lipolytic activity. The structural features required for effective synergistic lipolysis (with epinephrine) were generally similar to those required for potent PDE inhibition, except that, for lipolytic activity, an intact C-ring was necessary. **Fisetin** and quercetin, having the above-mentioned structure, caused a concn.- and time-dependent increase in **lipolysis** which was synergistic with epinephrine. Only butein and hesperetin caused inhibition of epinephrine-induced lipolysis, and their effect was concn.-dependent. A time-course study indicated that hesperetin was able to delay the lipolytic action of epinephrine. It is most likely that the lipolytic effects of these compds. were not a result of PDE inhibition, as the orders of potency for the 2 activities had poor correlation. Apparently, the effectively lipolytic flavonoids were also potent PDE inhibitors but not all the PDE inhibitors were able to induce lipolysis.

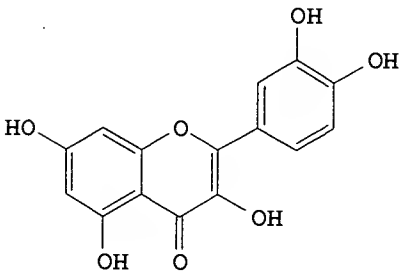
AB Thirty-one flavonoids were tested for their effects on low-Km phosphodiesterase (PDE) with cAMP as the substrate. Quercetin, luteolin, scutellarein, phloretin and genistein had inhibitory potencies comparable to or greater than that of 3-isobutyl-2-methylxanthine (EC50 30-50 .mu.M). Only 4 compds. (catechin, epicatechin, taxifolin and fustin) stimulated the enzyme activity (stimulatory EC50 130-240 .mu.M). The most potent PDE inhibitors were aglycons that had a C2,3 double bond, a keto group at C4 and hydroxyls at C3' and(or) C4'. However, when the C-ring is opened, the requirement for the C2,3 double bond is eliminated. The same series of flavonoids were also tested for their lipolytic activity. The structural features required for effective synergistic lipolysis (with epinephrine) were generally similar to those required for potent PDE inhibition, except that, for lipolytic activity, an intact C-ring was necessary. **Fisetin** and quercetin, having the above-mentioned structure, caused a concn.- and time-dependent increase in **lipolysis** which was synergistic with epinephrine. Only butein and hesperetin caused inhibition of epinephrine-induced lipolysis, and their effect was concn.-dependent. A time-course study indicated that hesperetin was able to delay the lipolytic action of epinephrine. It is most likely that the lipolytic effects of these compds. were not a result of PDE inhibition, as the orders of potency for the 2 activities had poor correlation. Apparently, the effectively lipolytic flavonoids were also potent PDE inhibitors but not all the PDE inhibitors were able to induce lipolysis.

IT 60-81-1, Phloridzin 60-82-2, Phloretin 90-19-7, Rhamnetin 94-41-7, Chalcone 117-39-5, Quercetin 153-18-4, Rutin 154-23-4, Catechin (flavan) 446-72-0, Genistein 480-16-0, Morin 480-18-2, Taxifolin 480-40-0, Chrysin 480-41-1, Naringenin 486-66-8, Daidzein 487-26-3, Flavanone 487-52-5, Butein 490-46-0, Epicatechin 491-70-3, Luteolin 520-18-3, Kaempferol 520-26-3, Hesperidin 520-27-4, Diosmin 520-33-2, Hesperetin 520-34-3, Diosmetin 520-36-5 525-82-6, Flavone **528-48-3**, **Fisetin** 529-44-2, Myricetin 529-53-3, Scutellarein 5373-11-5, Luteolin-7-glucoside 10236-47-2 17912-87-7, Myricitrin 20725-03-5, Fustin
RL: BIOL (Biological study)
(cAMP phosphodiesterase inhibition by and **lipolytic** activity of, structure in relation to)

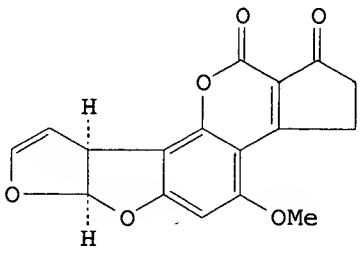
=> d ibib abs kwic 6-10

L4 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1986:587368 CAPLUS
DOCUMENT NUMBER: 105:187368
TITLE: Effects of flavonoids on the production of volatile sulfur compounds by anaerobes
AUTHOR(S): Hayashi, Hiroyuki
CORPORATE SOURCE: Oral Care Lab., Sun Star Co., Ltd., Takatsuki, 569, Japan
SOURCE: Koku Eisei Gakkai Zasshi (1985), 35(4), 648-9
CODEN: KEGZA7; ISSN: 0023-2831
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
AB Morin, chrysin, and flavone in low concn. repressed the prodn. of volatile S compds. by oral anaerobes. The effect seems to be due to chem. or physiol. activity other than antibacterial activity. Myricetin, fisetin, and chalcone repressed the prodn. of volatile S compds. by their high antibacterial activity.
IT 94-41-7 480-16-0 480-40-0 525-82-6 **528-48-3** 529-44-2
RL: BIOL (Biological study)
(volatile sulfur compd. formation by oral **anaerobes** repression by)

L4 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1979:414915 CAPLUS
DOCUMENT NUMBER: 91:14915
TITLE: Inhibition of aflatoxin B1-induced cytotoxicity and binding to DNA in cultured rat liver cells by naturally occurring flavones
AUTHOR(S): Schwartz, Arthur G.; Rate, William R.
CORPORATE SOURCE: Med. Sch., Temple Univ., Philadelphia, PA, 19140, USA
SOURCE: J. Environ. Pathol. Toxicol. (1979), 2(4), 1021-8
CODEN: JEPTDQ; ISSN: 0146-4779
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I



II

AB Four naturally occurring flavones, quercetin (I) [117-39-5], **fisetin** [**528-48-3**], nobiletin [478-01-3], and tangeretin [481-53-8], protected cultured rat liver epithelial-like cells against aflatoxin B1 (II) [1162-65-8]-induced cytotoxicity and inhibited the binding of II-3H to **cellular** DNA. The methoxy-substituted flavones, nobiletin and tangeretin showed greater protection against cytotoxicity than did the hydroxy-substituted compds., I and fisetin.
AB Four naturally occurring flavones, quercetin (I) [117-39-5], **fisetin** [**528-48-3**], nobiletin [478-01-3], and

tangeretin [481-53-8], protected cultured rat liver epithelial-like cells against aflatoxin B1 (II) [1162-65-8]-induced cytotoxicity and inhibited the binding of II-3H to **cellular** DNA. The methoxy-substituted flavones, nobiletin and tangeretin showed greater protection against cytotoxicity than did the hydroxy-substituted compds., I and fisetin.

L4 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1971:123973 CAPLUS
DOCUMENT NUMBER: 74:123973
TITLE: Investigation of flavones as fluorogenic spray reagents for organic compounds on a cellulose matrix. II. Detection of pesticides
AUTHOR(S): Mallet, V.; Frei, Roland W.
CORPORATE SOURCE: Dep. Chem., Dalhousie Univ., Halifax, Nova Scotia, Can.
SOURCE: J. Chromatogr. (1971), 56(1), 69-77
CODEN: JOCRAM
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Several classes of pesticides such as carbamates, s-triazines, organophosphates and chlorinated hydrocarbons were tested. Yellow fluorescent spots were obsd. on **cellulose** layers sprayed with **fisetin**. The visual detection limits obtained for these compds. with this new fluorogenic method range between 0.01 to 0.1 .mu.g. The method was also extended to herbicides and fungicides of a variety of chem. structures and conclusions were drawn as to the type of fluorescence phenomenon obsd. Some functional groups such as nitro and possibly amino, and mols. with a quinoid type of structure quenched the fluorescence of the spray reagent; while others, such as carboxylic, cyano and methoxy groups, did not.
AB Several classes of pesticides such as carbamates, s-triazines, organophosphates and chlorinated hydrocarbons were tested. Yellow fluorescent spots were obsd. on **cellulose** layers sprayed with **fisetin**. The visual detection limits obtained for these compds. with this new fluorogenic method range between 0.01 to 0.1 .mu.g. The method was also extended to herbicides and fungicides of a variety of chem. structures and conclusions were drawn as to the type of fluorescence phenomenon obsd. Some functional groups such as nitro and possibly amino, and mols. with a quinoid type of structure quenched the fluorescence of the spray reagent; while others, such as carboxylic, cyano and methoxy groups, did not.

L4 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1971:110750 CAPLUS
DOCUMENT NUMBER: 74:110750
TITLE: Flavones as fluorogenic spray reagents for organic compounds on a cellulose matrix. I. General discussion of the method
AUTHOR(S): Mallet, V.; Frei, Roland W.
CORPORATE SOURCE: Dep. Chem., Dalhousie Univ., Halifax, NS, Can.
SOURCE: J. Chromatogr. (1971), 54(2), 251-7
CODEN: JOCRAM
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The usefulness of flavanol, **fisetin**, and robinetin (3-hydroxy-, 3,3',4',7-tetrahydroxy-, and 3,3',4',5',7-pentahy-droxyflavones, resp.), as fluorogenic spray reagents for polar org. compds. on **cellulose** thin-layer chromatograms was demonstrated by application to the pesticide Baygon (2-isopropoxyphenyl N-methylcarbamate). Spraying the chromatogram with 0.05% flavones in iso-PrOH and uv-irradn. gave intensely yellow pesticide spots on a slightly yellow background. The fluorescence was

sufficiently stable to permit possible applications in quant. pesticide anal. Apparently, the fluorescence is specific to 3-hydroxyflavones with an unsubstituted 5-position.

AB The usefulness of flavanol, **fisetin**, and robinetin (3-hydroxy-, 3,3',4',7-tetrahydroxy-, and 3,3',4',5',7-pentahy-droxyflavones, resp.), as fluorogenic spray reagents for polar org. compds. on **cellulose** thin-layer chromatograms was demonstrated by application to the pesticide Baygon (2-isopropoxyphenyl N-methylcarbamate). Spraying the chromatogram with 0.05% flavones in iso-PrOH and uv-irradn. gave intensely yellow pesticide spots on a slightly yellow background. The fluorescence was sufficiently stable to permit possible applications in quant. pesticide anal. Apparently, the fluorescence is specific to 3-hydroxyflavones with an unsubstituted 5-position.

L4 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1958:104240 CAPLUS
DOCUMENT NUMBER: 52:104240
ORIGINAL REFERENCE NO.: 52:18383a-f
TITLE: Leucorobinetidin hydrate and leucofisetidin hydrate
AUTHOR(S): Roux, David G.; Freudenberg, Karl
CORPORATE SOURCE: Leather Ind. Research Inst., Grahamtown, S. Afr.
SOURCE: Ann. (1958), 613, 56-60
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB cf. following abstr. Dihydrorobinetin, m. 226-8.degree., [.alpha.] 13.8.degree., was hydrogenated 6 hrs. in MeOH with PtO2, filtered, evapd., and taken up in H2O giving 3,3',4,4',5',7-hexahydroxyflavane dihydrate (I) (leucorobinetinidin hydrate), C15H14O7.2H2O, losing H2O at 70.degree. in vacuo, [.alpha.]D21 3.7.degree. (c 1, 50% Me2CO), turning red above 150.degree. and forming a viscous mass at 172-5.degree.. With CH2N2 at -5.degree., I in MeOH gave the 3',4',5',7-tetra-Me deriv. of I, C19H22O7 (II), m. 230-1.degree. (MeOH), a small amt. of which when heated 40 min. with 1 cc. 3N HCl and 3 cc. iso-PrOH gave a red, unanalyzed tetramethylanthocyanidin and another unidentified compd., sepd. chromatographically, which showed a brilliant yellow-green fluorescence. The 3,4-di-Ac deriv. of II (0.6 g.), m. 112-13.degree. (EtOH), was formed by heating II 5-7 min. with 5 cc. Ac2O and 1 g. AcONa. Treated similarly, I gave the hexa-Ac deriv. of I, m. 149-52.degree. (EtOH then MeOH). A mixt. of 3 g. 2,4-(HO)2C6H3CHO and 6 g. 3,4,5-(HO)3C6H2COCH2OH in 100 cc. anhyd. HCO2H was satd. with HCl at or below 0.degree., kept 16 hrs. at 20.degree., and poured into excess Et2O giving 1.63 g. 3,3',4',5',7-pentahydroxyflavylium chloride, C15H11ClO6 (robinetidin chloride) (III) thick, dark rhombs with green metallic luster (9:1 MeOH-concd. HCl), chromatographically homogeneous, giving a blue ppt. with AlCl3. I (a few mg.) in 4 cc. iso-PrOH and 1 cc. 3N HCl heated 2 hrs. at about 90.degree. gave III, identified by its Rf in various solvent systems and by the absorption max. of the Al complex, but contaminated with robinetin, as shown chromatographically. Rhus succedanea (or R. glabra) (1 kg.) wood meal was extd. repeatedly with hot AcOEt; the evapd. ext. in 500 cc. hot H2O on cooling gave a mixt. of **fisetin** (IV) and fustin (dihydrofisetin) (V), 5 g. of which in 200 cc. hot H2O was filtered through a Solka-floc **cellulose** column and developed with H2O; IV was retained as a yellow fluorescent zone and V formed a rapidly moving blue zone (colored by Fe) from which was isolated pure colorless V, m. 214-16.degree., [.alpha.]D21 -2.2.degree. (c 1.5, 50% Me2CO); tetraacetate, m. 150.degree.. V (2 g.) hydrogenated 8 hrs. in 50 cc. abs. EtOH with 0.4 g. PtO2, gave 3,3',4,4',7-pentahydroxyflavan (VI), C15H14O6.0.5 H2O sintering 110.degree., decomp. about 126-30.degree. (after drying-over P2O5 in vacuo), [.alpha.]D21 -2.4.degree. (c 1.4, 50% Me2CO). VI in MeOH at -5.degree. with CH2N2 gave the 3',4',7-trimethyl deriv. (VII), rosettes, m. 150-1.degree. or fine needles, sintering

68-70.degree., m. 149.degree. (EtOH or iso-Pr2O), [.alpha.]D21 0.5.degree. [c 1.05, 2:1 (CHCl)2MeOH]. The 3,4-di-Ac deriv. of VII m. 121-2.degree. (EtOH). The penta-Ac deriv. of VI, noncryst. granules, giving satisfactory analytical data, was formed from VI with pyridine and Ac2O. Without giving details, R. and F. allude to the leucofisetinidin hydrate, obtained from quebracho wood, (cf. following abstract).

AB cf. following abstr. Dihydrorobinetin, m. 226-8.degree., [.alpha.] 13.8.degree., was hydrogenated 6 hrs. in MeOH with PtO2, filtered, evapd., and taken up in H2O giving 3,3',4,4',5',7-hexahydroxyflavane dihydrate (I) (leucorobinetinidin hydrate), C15H14O7.2H2O, losing H2O at 70.degree. in vacuo, [.alpha.]D21 3.7.degree. (c 1, 50% Me2CO), turning red above 150.degree. and forming a viscous mass at 172-5.degree.. With CH2N2 at -5.degree., I in MeOH gave the 3',4',5',7-tetra-Me deriv. of I, C19H22O7 (II), m. 230-1.degree. (MeOH), a small amt. of which when heated 40 min. with 1 cc. 3N HCl and 3 cc. iso-PrOH gave a red, unanalyzed tetramethylanthocyanidin and another unidentified compd., sepd. chromatographically, which showed a brilliant yellow-green fluorescence. The 3,4-di-Ac deriv. of II (0.6 g.), m. 112-13.degree. (EtOH), was formed by heating II 5-7 min. with 5 cc. Ac2O and 1 g. AcONa. Treated similarly, I gave the hexa-Ac deriv. of I, m. 149-52.degree. (EtOH then MeOH). A mixt. of 3 g. 2,4-(HO)2C6H3CHO and 6 g. 3,4,5-(HO)3C6H2COCH2OH in 100 cc. anhyd. HCO2H was satd. with HCl at or below 0.degree., kept 16 hrs. at 20.degree., and poured into excess Et2O giving 1.63 g. 3,3',4',5',7-pentahydroxyflavylium chloride, C15H11ClO6 (robinetidin chloride) (III) thick, dark rhombs with green metallic luster (9:1 MeOH-concd. HCl), chromatographically homogeneous, giving a blue ppt. with AlCl3. I (a few mg.) in 4 cc. iso-PrOH and 1 cc. 3N HCl heated 2 hrs. at about 90.degree. gave III, identified by its Rf in various solvent systems and by the absorption max. of the Al complex, but contaminated with robinetin, as shown chromatographically. Rhus succedanea (or R. glabra) (1 kg.) wood meal was extd. repeatedly with hot AcOEt; the evapd. ext. in 500 cc. hot H2O on cooling gave a mixt. of **fisetin** (IV) and fustin (dihydrofisetin) (V), 5 g. of which in 200 cc. hot H2O was filtered through a Solka-floc **cellulose** column and developed with H2O; IV was retained as a yellow fluorescent zone and V formed a rapidly moving blue zone (colored by Fe) from which was isolated pure colorless V, m. 214-16.degree., [.alpha.]D21 -2.2.degree. (c 1.5, 50% Me2CO); tetraacetate, m. 150.degree.. V (2 g.) hydrogenated 8 hrs. in 50 cc. abs. EtOH with 0.4 g. PtO2, gave 3,3',4,4',7-pentahydroxyflavan (VI), C15H14O6.0.5 H2O sintering 110.degree., decomp. about 126-30.degree. (after drying-over P2O5 in vacuo), [.alpha.]D21 -2.4.degree. (c 1.4, 50% Me2CO). VI in MeOH at -5.degree. with CH2N2 gave the 3',4',7-trimethyl deriv. (VII), rosettes, m. 150-1.degree. or fine needles, sintering 68-70.degree., m. 149.degree. (EtOH or iso-Pr2O), [.alpha.]D21 0.5.degree. [c 1.05, 2:1 (CHCl)2MeOH]. The 3,4-di-Ac deriv. of VII m. 121-2.degree. (EtOH). The penta-Ac deriv. of VI, noncryst. granules, giving satisfactory analytical data, was formed from VI with pyridine and Ac2O. Without giving details, R. and F. allude to the leucofisetinidin hydrate, obtained from quebracho wood, (cf. following abstract).

=> FIL STNGUIDE

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	36.84	43.16

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-4.34	-4.34

FILE 'STNGUIDE' ENTERED AT 17:31:23 ON 09 FEB 2002

USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT
COPYRIGHT (C) 2002 AMERICAN CHEMICAL SOCIETY, JAPAN SCIENCE
AND TECHNOLOGY CORPORATION, AND FACHINFORMATIONSZENTRUM KARLSRUHE

FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Feb 8, 2002 (20020208/UP).

=> fil stng

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.00	43.16

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-4.34

FILE 'STNGUIDE' ENTERED AT 17:32:22 ON 09 FEB 2002
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT
COPYRIGHT (C) 2002 AMERICAN CHEMICAL SOCIETY, JAPAN SCIENCE
AND TECHNOLOGY CORPORATION, AND FACHINFORMATIONSZENTRUM KARLSRUHE

FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Feb 8, 2002 (20020208/UP).

=>

---Logging off of STN---

=>
Executing the logoff script...

=> LOG Y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.00	43.16

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-4.34

STN INTERNATIONAL LOGOFF AT 17:51:16 ON 09 FEB 2002